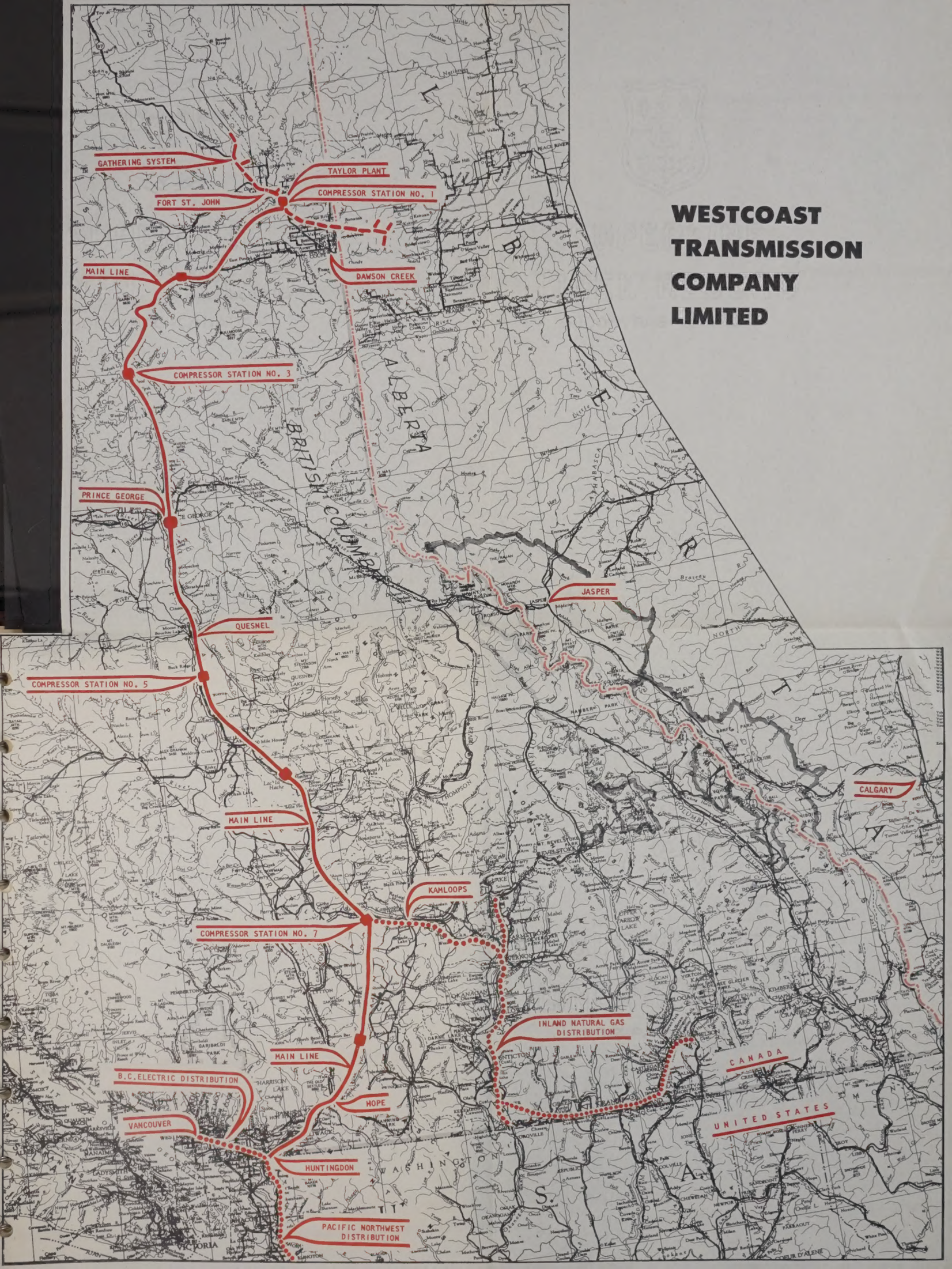
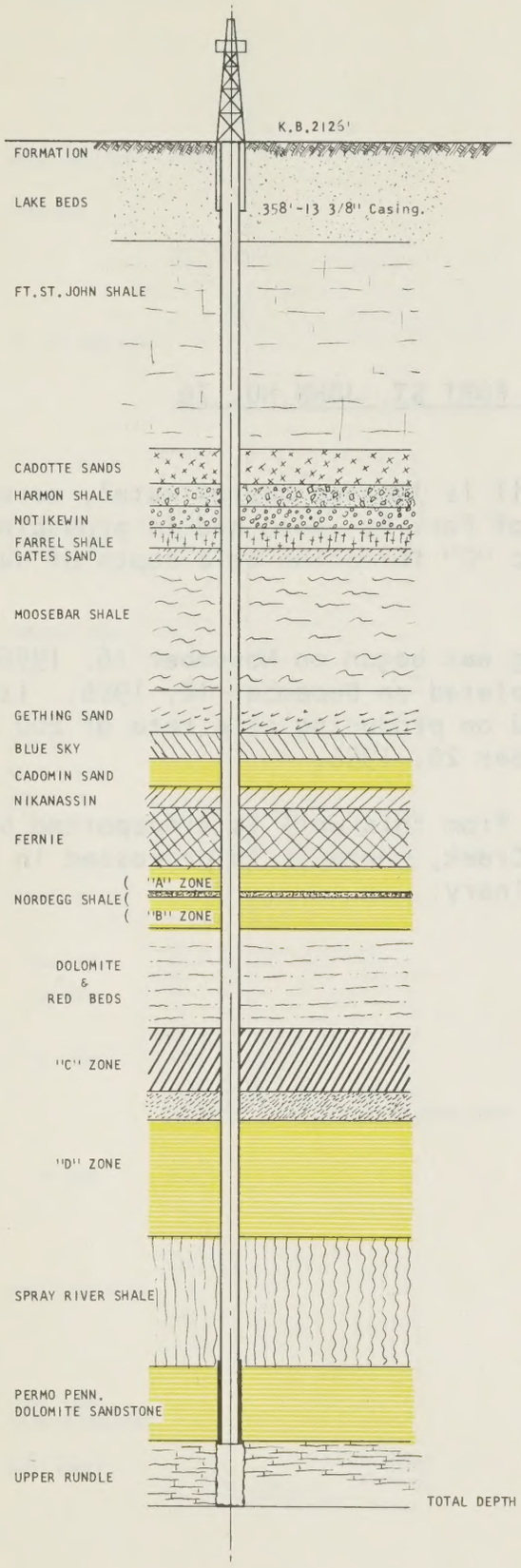


WESTCOAST TRANSMISSION COMPANY LIMITED

PACIFIC FORT ST. JOHN NO.4

LSD 14-21-83-18-W.6 MER.

Spudded Jan 18/52 — GAS WELL. — Complete June 18/52



PACIFIC FORT ST. JOHN NO. 76

This well is located approximately seven miles southeast of Fort St. John and is producing from the triassic "C" formation at a depth of 4400 feet.

Drilling was begun on November 16, 1956 and the well was completed on December 12, 1956. It was officially placed on producing at a rate of 200 barrels per day on December 20, 1956.

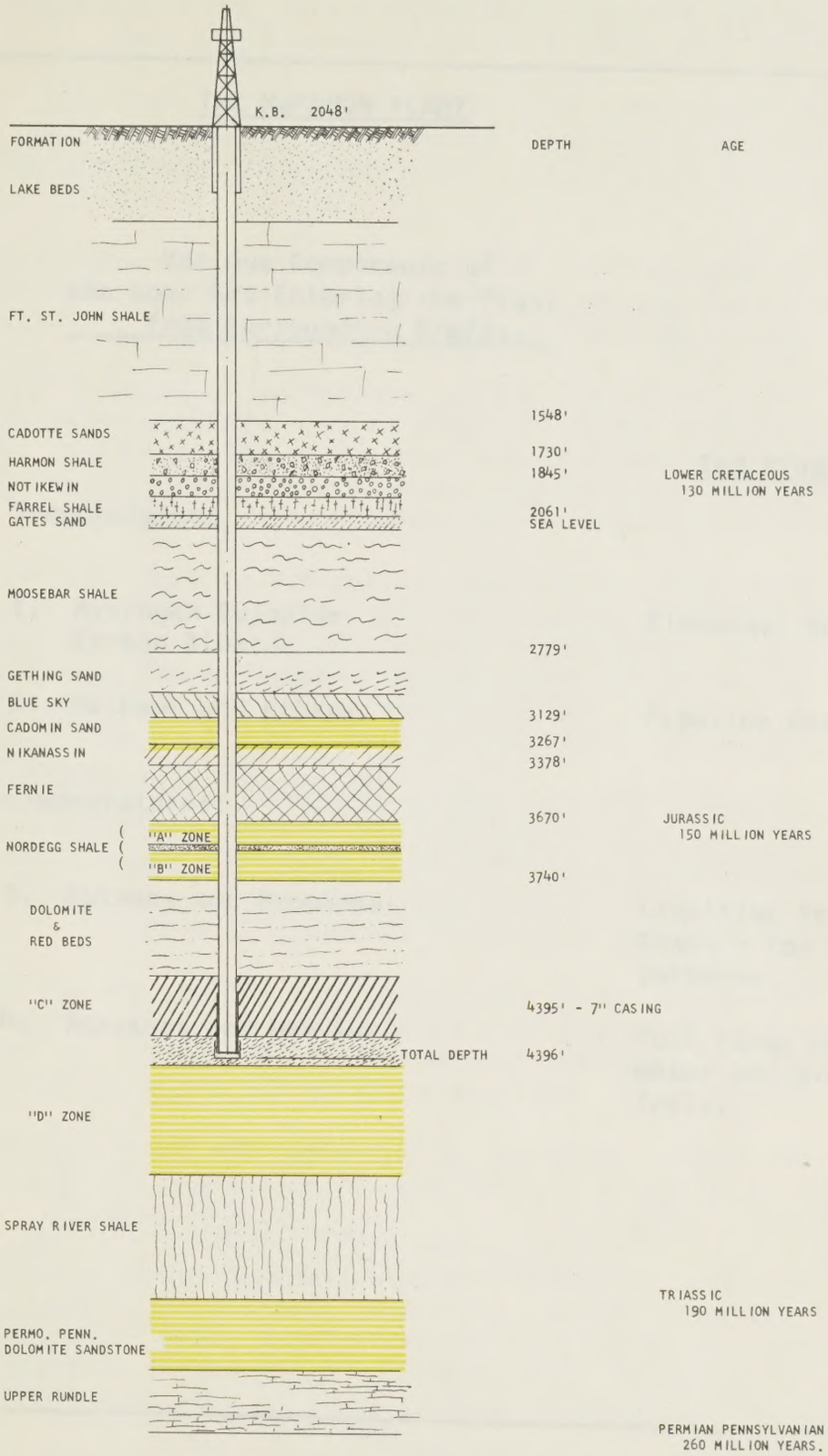
The oil from this well is transported by tank truck to Dawson Creek, where it is processed in the Dawson Creek refinery.

PACIFIC FORT ST. JOHN NO. 76

LSD 10-14-83-18-W. 6 MER.

OIL WELL.

Spudded Nov 16/56 — Complete Dec 12/56



THE McMAHON PLANT

Various Components of the Sour Gas Entering the Plant from Surrounding Fields.

		End Product
Vapors at Ordinary Temperatures:		
1.	Hydrogen Sulphide Carbon Dioxide	Elemental Sulphur
2.	Methane and Ethane	Pipeline Gas
Liquids at Ordinary Temperatures:		
3.	Butanes and Propanes	Liquified Petroleum Gases - for heating purposes.
4.	Pentanes and Heavier	Full range of motor and diesel fuels.

Perhaps the most striking example of the benefits which have followed construction of the Westcoast Transmission pipeline is the McMahon Plant, which has brought a new industrial life to the Peace River area.

The function of this plant is to treat "sour" gas - that is, gas containing liquid hydrocarbons - before it enters the pipeline. The end products are "sweet" gas for the pipeline, and a number of by-products which are described briefly here.

The McMahon Plant has an initial designed capacity of 300 million cubic feet of pipeline gas per day. It can be modified without halting operations to increase the flow to 400 million cubic feet per day.

A mixture of sour gas and condensate is piped in through three separate gas gathering systems, which terminate at the Inlet Separator Building 1, where the condensate is removed from the sour gas in gas scrubbers. These scrubbers physically separate the condensed hydrocarbon liquids from the sour gas with the condensate then being piped to the refinery area 2, 2a, 2b.

Still other hydrocarbon liquids are removed from the gas in the Absorption-Dehydration Building 3 by means of oil absorption. These liquids, which consist of propane, butane, pentanes and heavier fluids, are removed from the absorption oil and transmitted to the Refinery area where they are processed by stabilization, fractionation, unifining, and reforming 2a and 2b into specification propane, butane, motor gasoline fuels, kerosene and diesel fuel.

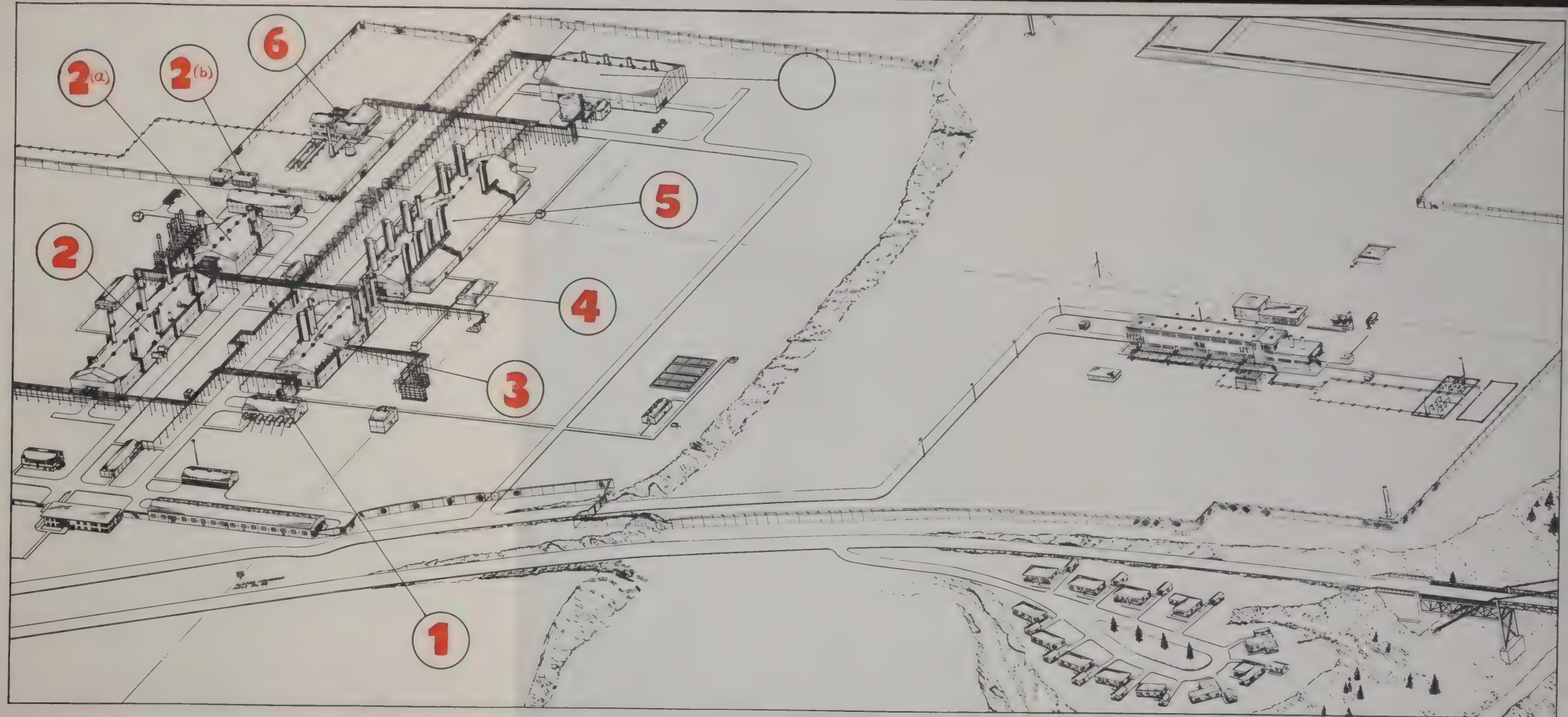
Meanwhile, the sour gas which has left the inlet scrubbers in the first operation passes directly through the Absorption-Dehydration Building 3 into the Gas Treating Building 5 where the acid gases (hydrogen sulphide and carbon dioxide) are removed. These acid gases are piped to the Sulphur Recovery Building 6 where they are converted to pure elemental sulphur.

The gas, which is now "sweet" gas, leaves the Gas Treating Building and enters the Absorption-Dehydration Building 3 where the propane, butane, and heavier hydrocarbon fractions are removed by absorption. It then passes through dehydration vessels which remove essentially all traces of water.

The Control Building 4 contains the nerve centre for process operations in buildings, 1, 3 and 5. All process operations in these three buildings can be controlled automatically.

The Power House 7 supplies steam to generate power, which is also used for process heating throughout the plant. The electrical power generated is used for the operation of electrical motors, driving pumps, compressors, fans, etc. The boilers in this power house produce 600,000 pounds of steam per hour, and the electrical generators produce 10,000 electrical H.P.

We also operate a process cooling water pump house, located on the Peace River near the Suspension Bridge, which is capable of pumping 30,000 gallons of cooling water per minute, or 43,000,000 gallons per day. It is interesting to note that this pumping station delivers sufficient water to serve the needs of a city of 300,000.


2(a)
2(b)
6
5
2
4
3
1

COMPRESSOR STATION

NUMBER ONE

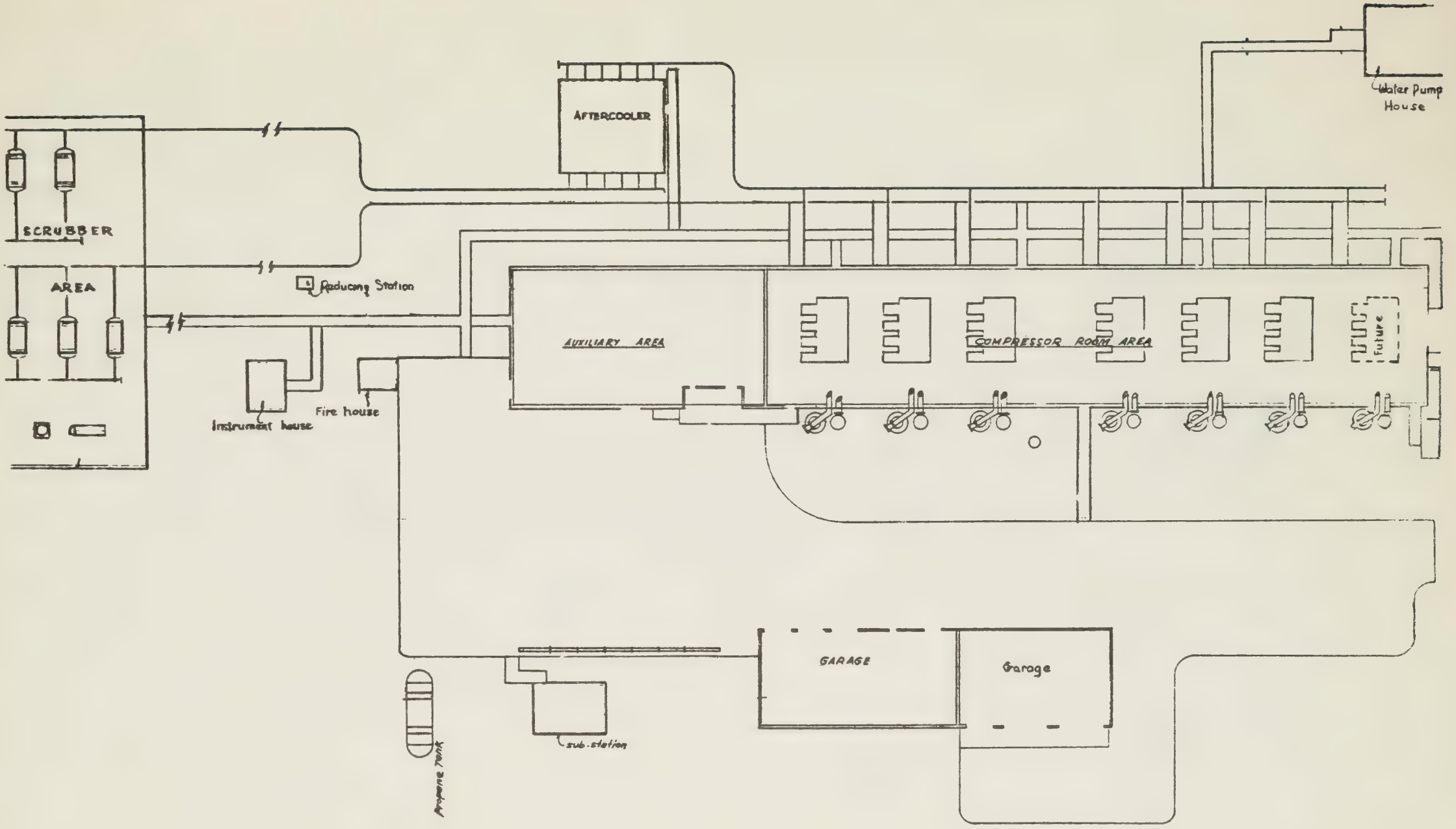
The giant engines and complex auxiliary equipment of a pipeline compressor station serve a simple purpose: to raise the pressure of gas from the fields and force it into the pipeline for rapid transmission to market.

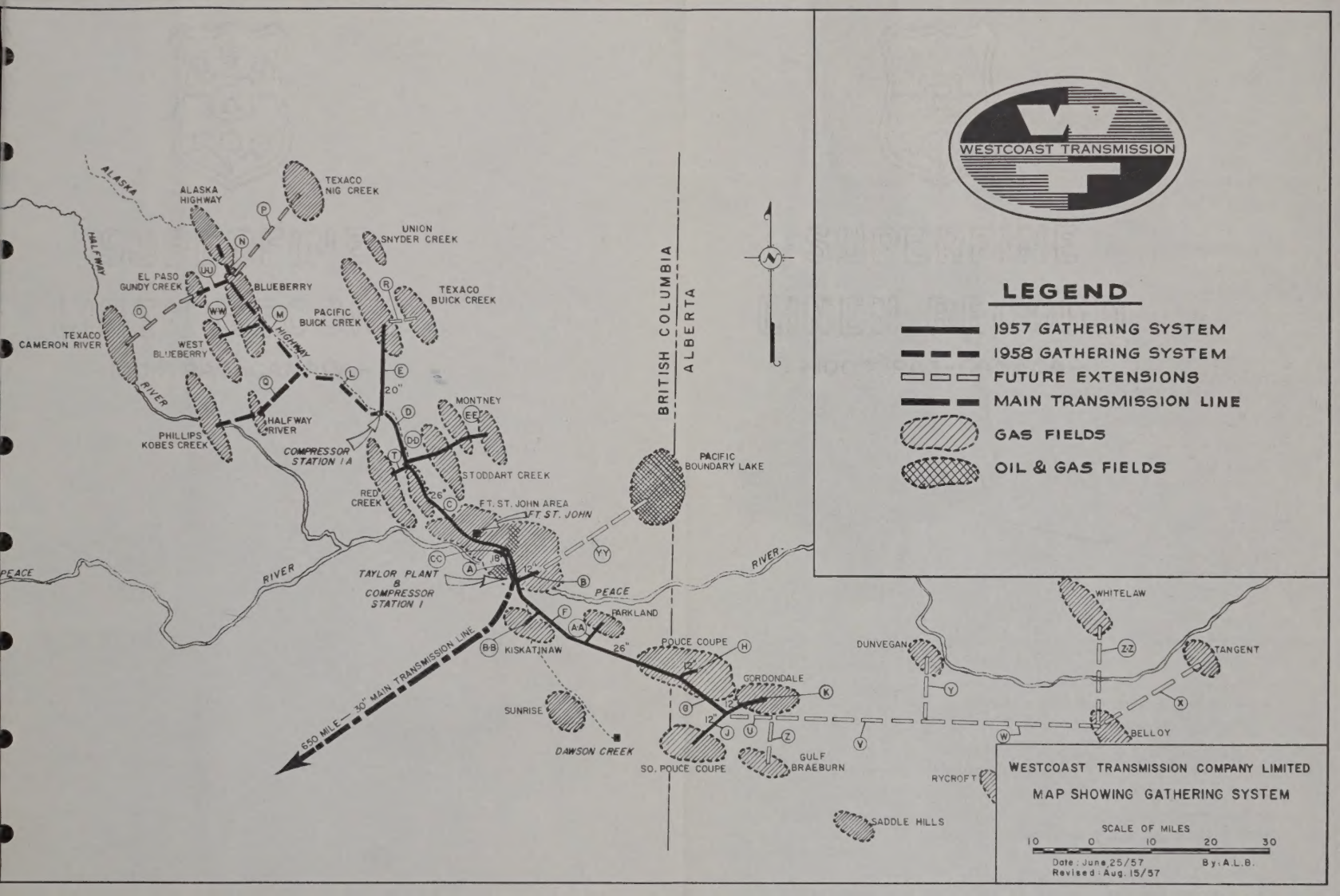
Compressor Station No. 1 takes natural gas from both the British Columbia and Alberta gathering systems. The British Columbia gas is compressed and returned to the McMahon Plant for processing. The Alberta gas is compressed and forced into the pipeline.

Before entering the compressor station, gas from the gathering systems is passed through scrubbers (indicated on the diagram opposite) to remove liquids. After compression, the gas is cooled in aftercoolers before entering the transmission line.

The six engines at Station No. 1 are each rated at 2000 horsepower, and each engine has four compressor cylinders.

Boilers, air compressors and electrical equipment are all located in the auxiliary room.


SCRUBBER
AREA
AFTERCOOLER
Water Pump House
Reducing Station
AUXILIARY AREA
COMPRESSOR ROOM AREA
Future
Instrument house
Fire house
GARAGE
Garage
sub. station
Propane Tank


WESTCOAST TRANSMISSION
LEGEND
1957 GATHERING SYSTEM
1958 GATHERING SYSTEM
FUTURE EXTENSIONS
MAIN TRANSMISSION LINE
GAS FIELDS
OIL & GAS FIELDS
ALASKA HIGHWAY
ALASKA
HALFWAY
TEXACO NIG CREEK
UNION SNYDER CREEK
EL PASO GUNDY CREEK
BLUEBERRY
TEXACO BUICK CREEK
PACIFIC BUICK CREEK
TEXACO CAMERON RIVER
WEST BLUEBERRY
HIGHWAY
RIVER
HALFWAY RIVER
PHILLIPS KOBES CREEK
COMPRESSOR STATION 1A
MONTNEY
STODDART CREEK
RED CREEK
FT. ST. JOHN AREA
FT ST. JOHN
BRITISH COLUMBIA
ALBERTA
PACIFIC BOUNDARY LAKE
PEACE RIVER
TAYLOR PLANT & COMPRESSOR STATION 1
PARKLAND
KISKATINAW
650 MILE — 30" MAIN TRANSMISSION LINE
SUNRISE
DAWSON CREEK
POUCE COUPE
GORDONDALE
SO. POUCE COUPE
GULF BRAEBURN
SADDLE HILLS
DUNVEGAN
WHITELAW
TANGENT
BELLOY
RYCROFT
WESTCOAST TRANSMISSION COMPANY LIMITED
MAP SHOWING GATHERING SYSTEM
SCALE OF MILES
10 0 10 20 30
Date: June 25/57
Revised: Aug. 15/57
By: A.L.B.